

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY DOCKET NO.
97-1681-PSERIAL NO.
09/652,513

Shaw, et al.

FILING
August 31, 2000GROUP
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U.S. PATENT DOCUMENTS

| *EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|----------------------|-----------------|----------|--------------------|-------|----------|-------------------------------|
| SLA | 3,937,792 | 2/10/76 | Lumby | 423 | 344 | 3/14/72 |
| SLD | 4,017,319 | 4/12/77 | Greskovich, et al. | 106 | 55 | 1/6/76 |
| SLA | 4,127,630 | 11/28/78 | Washburn | 264 | 65 | 12/3/75 |
| SLA | 4,285,895 | 8/25/81 | Mangels, et al. | 264 | 65 | 9/24/79 |
| SLA | 4,351,787 | 9/28/82 | Martinengo, et al. | 264 | 65 | 12/18/78 |
| SLA | 4,356,136 | 10/26/82 | Mangels | 264 | 65 | 8/29/80 |
| SLD | 4,377,542 | 3/22/83 | Mangels, et al. | 264 | 65 | 12/21/81 |
| SLA | 4,428,916 | 1/31/84 | Komeya, et al. | 423 | 344 | 9/26/79 |
| SLA | 4,552,740 | 11/12/85 | Morgan, et al. | 423 | 344 | 2/22/85 |
| SLA | 4,623,498 | 11/18/86 | Beckwith, et al. | 264 | 65 | 7/12/84 |
| SLD | 4,687,655 | 8/18/87 | Hunold, et al. | 423 | 344 | 4/11/86 |

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| | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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| SLA | | Shaw, et al. "A Novel Process for Synthesizing Nanostructured WC/Co Powders" Powder Metallurgy Alloys and Particulate Materials for Industrial Applications, D.E. Alman and J.W. Newkirk, Eds., A Publication of TMS, pp. 75-80, 2000 |
| SLD | | Ban, et al. "On the Reaction Sequence of WC-Co Formation Using an Intergrated Mechanical and Thermal Activation Process", Acta mater. 49 (2001) 2933-2939 |

EXAMINER

Anderson

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10/10/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



97-1681-P

09/652,513

Shaw, et al.

FILING

August 31, 2000

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U.S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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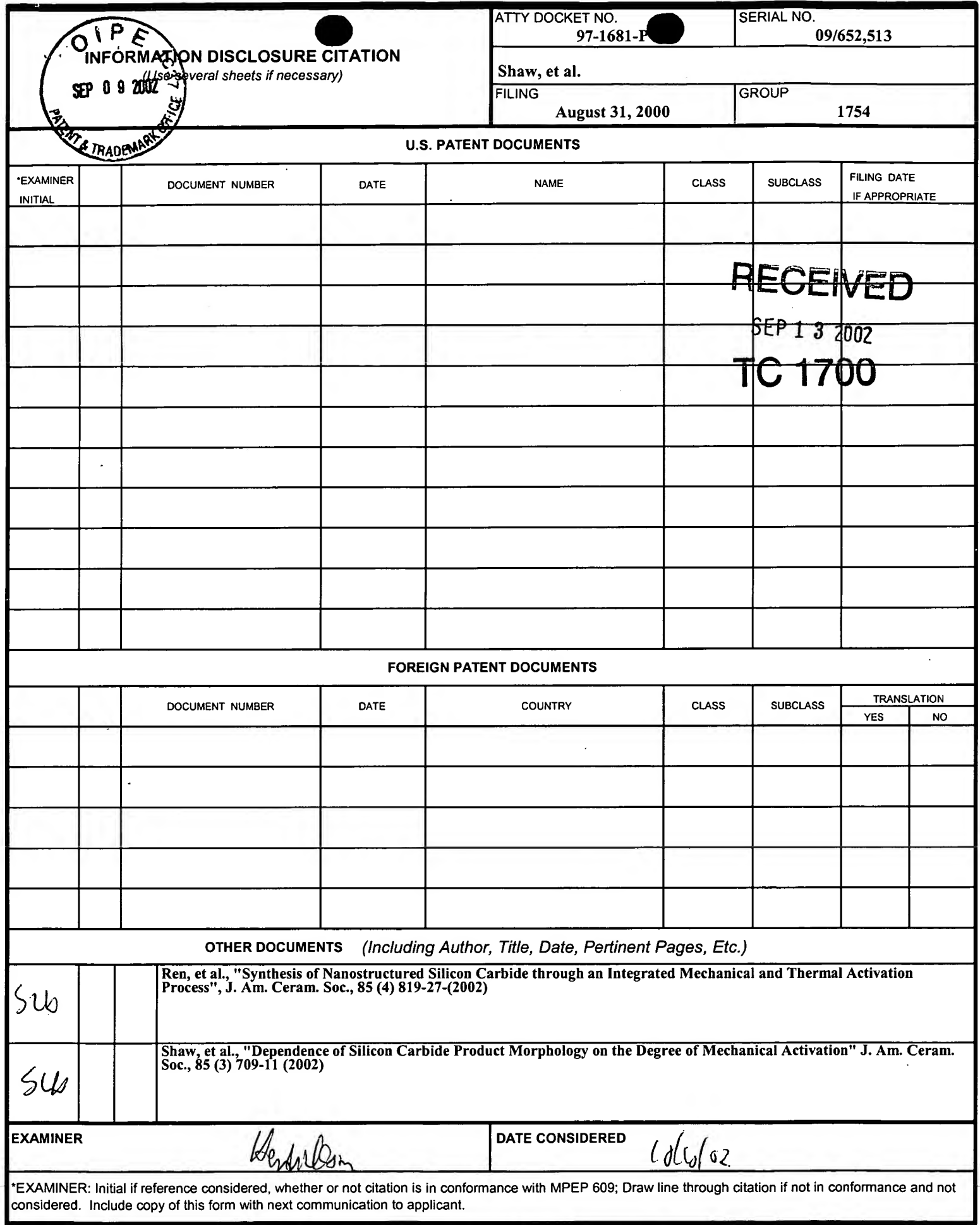
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

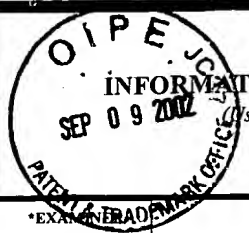
Shaw, Leon L., "Material Processing Via An Intergrated Mechanical and Thermal Activation Process", *Materials and Manufacturing Processes*, 16(3), 405-418(2001)

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INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Docket Number (Optional)

97-1681-P

Application Number

09/652,513

Applicant(s)

Shaw, et. al.

Filing Date

August 31, 2000

Group Art Unit

1754

*EXAMINER

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

INITIAL

SLD

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P. Schwarzkopf and R. Kieffer, Refractory Hard Metals, The Macmillan Company, New York, 1953, pp. 138-161.

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Andrewson

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|  <p style="text-align: center;">INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)</p> | ATTY DOCKET NO. 97-1681 | SERIAL NO. 09/652,513 |
| | Shaw, et al. | |
| | FILING August 31, 2000 | GROUP 1754 |

U.S. PATENT DOCUMENTS

| *EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
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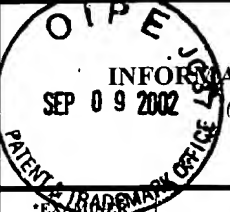

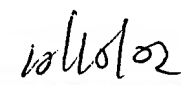
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| 560 | | Ren, et al. "Synthesis of Nanostructured TiC via Carbothermic Reduction Enhanced by Mechanical Activation", Scripta Materialia. Vol. 38. No. 5. pp. 735-741. 1998 |

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| EXAMINER <div style="text-align: center; font-family: cursive; font-size: 1.2em;">Gendritson</div> | DATE CONSIDERED <div style="text-align: center; font-family: cursive; font-size: 1.2em;">10/10/02</div> |
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|--|--|---|----------------------------------|
|  INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) | | Docket Number (Optional) 97-1681 | Application Number 09/652,518 |
| | | Applicant(s) Shaw, et al. | |
| | | Filing Date August 31, 2000 | Group Art Unit 1754 |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | |
| INITIAL | | | |
| SLA | N.C. Angastiniotis, et al. "Formation and Alloying of Nanostructured β -W Powders", NanoStructured Materials. Vol. 1 pp. 293-302, 1992 | | |
| SLA | Zhu, et al. "A New Route for the Synthesis of Tungsten Carbide-Cobalt Nanocomposites" J. Am. Ceram. Soc. 77 (10) 2777-2778 (1994) | | |
| SLA | Gao, et al. "Low Temperature Carburization of High Surface Area Tungsten Powders" NanoStructured Materials, Vol. 5, pp. 555-569 (1995) | | |
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| SLA | L. Gao and B.H. Kear, "Synthesis of Nanophase WC Powder by a Displacement Reaction Process," Nanostruct. Mater., 9, 205-208 (1997) | | |
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| SLA | P. Williams, "Sur la Preparation et les Propietes d'un Nouveau Carbure de Tungstene", Comt. Rend., 126, 1722 (1898) | | |
| SLA | N. Pring and W. Fielding, "The Preparation at High Temperatures of some Refractory Metal s from their Chlorides", J. Chem. Soc., 95, 1497-1507 (1909) | | |
| SLA | I. E. Campbell, C.F. Powell, D.H. Nowicki and B.W. Gonser, " The Vapor Phase Deposition of Refractory Materials", J. Electrochem. Soc., 96, 318 (1949) | | |
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| SLA | P. Seegopaul, L.E. McCandlish and F.M. Shinneman "Production Capability and Powder Processing Methods for Nanostructured WC-Co Powder", Int. J. of Refractory Metals & Hard Materials 15 (1997) 133-138 | | |
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